ENVIRONMENTAL DYNAMICS INC.
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Date Received: 07-MAY-15
Report Date: 17-JUN-15 15:09 (MT)
Version: FINAL

Client Phone: 867-393-4882

Certificate of Analysis

Lab Work Order #: L1608599

Project P.O. #: NOT SUBMITTED
Job Reference: MOUNT NANSEN 15-Y-0146
C of C Numbers: 1, 2, 3, 4, 5
Legal Site Desc:

Can Dang
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1608599-1 Water 04-MAY-15 16:45 0146-150504-036	L1608599-2 Water 04-MAY-15 16:05 0146-150504-034	L1608599-3 Water 04-MAY-15 18:30 0146-150504-033	L1608599-4 Water 04-MAY-15 13:30 0146-150504-035	L1608599-5 Water 05-MAY-15 08:18 0146-150505-025
WATER						
Physical Tests	Conductivity (uS/cm)	214	234	757	215	346
	Hardness (as CaCO3) (mg/L)	111	114	391	102	163
	pH (pH)	8.07	8.10	7.93	8.09	7.53
	Total Suspended Solids (mg/L)	8.7	6.0	7.3	6.0	18.0
	Total Dissolved Solids (mg/L)	129	132	518	112	214
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	68.4	71.7	46.7	53.7	17.7
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	68.4	71.7	46.7	53.7	17.7
	Ammonia, Total (as N) (mg/L)	0.0050	0.0061	<0.0050	0.0051	0.0140
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.046	0.053	0.363	0.054	0.078
	Nitrate (as N) (mg/L)	0.0089	0.0103	0.117	0.0073	0.155
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	0.0011	<0.0010	0.0029
	Sulfate (SO4) (mg/L)	45.1	45.6	342	40.6	139
	Anion Sum (meq/L)	2.31	2.39	8.07	1.92	3.26
	Cation Sum (meq/L)	2.37	2.42	7.90	2.19	3.31
	Cation - Anion Balance (%)	1.4	0.8	-1.1	6.5	0.8
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Cyanate (mg/L)	<2.0 DLIS	<0.20	<0.20	<0.20	
	Thiocyanate (SCN) (mg/L)	<0.50	<0.50	<0.50	0.54	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.315	0.242	0.0511	0.355	0.403
	Antimony (Sb)-Total (mg/L)	0.00036	0.00035	0.00754	0.00037	0.00268
	Arsenic (As)-Total (mg/L)	0.00387	0.00367	0.0644	0.00377	0.0194
	Barium (Ba)-Total (mg/L)	0.0579	0.0581	0.00291	0.0626	0.0124
	Beryllium (Be)-Total (mg/L)	<0.000020	<0.000020	<0.000020	0.000021	0.000032
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	0.000110	<0.000050	0.000209
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000642	0.0000584	0.00211	0.0000810	0.00128
	Calcium (Ca)-Total (mg/L)	30.9	30.1	128	28.4	58.1
	Chromium (Cr)-Total (mg/L)	0.00062	0.00044	0.00016	0.00055	0.00043
	Cobalt (Co)-Total (mg/L)	0.00025	0.00022	<0.00010	0.00028	0.00031
	Copper (Cu)-Total (mg/L)	0.00200	0.00204	0.00120	0.00253	0.0434
	Iron (Fe)-Total (mg/L)	0.414	0.375	0.203	0.570	0.881
	Lead (Pb)-Total (mg/L)	0.00114	0.00104	0.00767	0.00123	0.0131
	Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	0.0026	<0.0010	<0.0010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1608599-6	L1608599-7	L1608599-8	L1608599-9	L1608599-10
Description	Water	Water	Water	Water	Water
Sampled Date	04-MAY-15	05-MAY-15	04-MAY-15	05-MAY-15	05-MAY-15
Sampled Time	13:25	13:45	16:25	10:35	10:20
Client ID	0146-150504-037	0146-150505-020	0146-150504-FIELD BLANK	0146-150505-024	0146-150505-023
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (uS/cm)	217	198	<2.0	840	846
Hardness (as CaCO3) (mg/L)	101	94.5	<0.50	465	474
pH (pH)	8.09	8.05	5.49	8.24	8.25
Total Suspended Solids (mg/L)	6.0	24.7	<3.0	<3.0	<3.0
Total Dissolved Solids (mg/L)	120	101	<1.0	562	582
Anions and Nutrients Alkalinity, Bicarbonate (as CaCO3) (mg/L)	67.1	58.8	<1.0	105	130
Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3) (mg/L)	67.1	58.8	<1.0	105	130
Ammonia, Total (as N) (mg/L)	<0.0050	<0.0050	<0.0050	0.417	0.414
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F) (mg/L)	0.057	0.059	<0.020	0.074	0.075
Nitrate (as N) (mg/L)	0.0075	0.0232	<0.0050	0.0396	0.0395
Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	0.0021	0.0021
Sulfate (SO4) (mg/L)	40.8	28.8	<0.30	326	327
Anion Sum (meq/L)	2.19	1.78	<0.10	8.89	9.42
Cation Sum (meq/L)	2.17	2.03	<0.10	9.76	9.95
Cation - Anion Balance (%)	-0.5	6.6	0.0	4.7	2.8
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanate (mg/L)	<0.20	<0.20	<0.20	<0.20	<0.20
Thiocyanate (SCN) (mg/L)	0.54	<0.50	<0.50	0.52	0.54
Total Metals Aluminum (Al)-Total (mg/L)	0.331	1.57	<0.0030	0.0319	0.0391
Antimony (Sb)-Total (mg/L)	0.00035	0.00062	<0.00010	0.00227	0.00259
Arsenic (As)-Total (mg/L)	0.00341	0.0118	<0.00010	0.0130	0.0148
Barium (Ba)-Total (mg/L)	0.0585	0.0860	<0.000050	0.0449	0.0473
Beryllium (Be)-Total (mg/L)	<0.000020	0.000064	<0.000020	<0.000020	<0.000020
Bismuth (Bi)-Total (mg/L)	<0.000050	0.000160	<0.000050	<0.000050	<0.000050
Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	0.014	0.015
Cadmium (Cd)-Total (mg/L)	0.0000684	0.000268	<0.0000050	0.000164	0.000171
Calcium (Ca)-Total (mg/L)	26.4	26.2	<0.050	118	124
Chromium (Cr)-Total (mg/L)	0.00051	0.00166	<0.00010	<0.00050 DLB	0.00021
Cobalt (Co)-Total (mg/L)	0.00024	0.00075	<0.00010	0.00118	0.00125
Copper (Cu)-Total (mg/L)	0.00246	0.00519	<0.00050	0.00207	0.00181
Iron (Fe)-Total (mg/L)	0.534	2.26	<0.010	0.629	0.668
Lead (Pb)-Total (mg/L)	0.00115	0.00765	<0.000050	0.000902	0.00134
Lithium (Li)-Total (mg/L)	0.0011	0.0014	<0.0010	0.0018	0.0021

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1608599-11	L1608599-12	L1608599-13	L1608599-14	L1608599-15
Description	Water	Water	Water	Water	Water
Sampled Date	05-MAY-15	05-MAY-15	05-MAY-15	05-MAY-15	05-MAY-15
Sampled Time	16:46	17:15	12:20	16:25	11:35
Client ID	0146-150505-030	0146-150505-029	0146-150505-022	0146-150505-028	0146-150505-021
Grouping / **Analyte**					
WATER					
Physical Tests					
Conductivity (uS/cm)	748	810	168	1540	171
Hardness (as CaCO3) (mg/L)	346	464	84.1	856	82.2
pH (pH)	7.64	8.18	8.07	8.00	8.09
Total Suspended Solids (mg/L)	4.0	155	24.0	48.7	10.0
Total Dissolved Solids (mg/L)	507	553	92.2	1190	82.3
Anions and Nutrients					
Alkalinity, Bicarbonate (as CaCO3) (mg/L)	24.8	123	70.9	194	57.4
Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3) (mg/L)	24.8	123	70.9	194	57.4
Ammonia, Total (as N) (mg/L)	0.218	0.0480	<0.0050	4.14	<0.0050
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<2.5 DLA	<0.50
Fluoride (F) (mg/L)	0.133	0.077	0.049	<0.10 DLA	0.047
Nitrate (as N) (mg/L)	0.0873	0.0097	0.0287	0.317	0.0287
Nitrite (as N) (mg/L)	0.0033	<0.0010	<0.0010	0.0154	<0.0010
Sulfate (SO4) (mg/L)	351	312	17.0	703	15.9
Anion Sum (meq/L)	7.83	8.96	1.77	18.5	1.48
Cation Sum (meq/L)	7.26	9.59	1.81	20.0	1.77
Cation - Anion Balance (%)	-3.8	3.4	1.0	3.8	8.9
Cyanides					
Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	0.0084	<0.0050
Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	0.0530	<0.0050
Cyanate (mg/L)	<0.20	<2.0 DLIS	<0.20	0.33	0.25
Thiocyanate (SCN) (mg/L)	<0.50	0.52	<0.50	3.75	<0.50
Total Metals					
Aluminum (Al)-Total (mg/L)	0.0670	2.66	0.432	0.0567	0.356
Antimony (Sb)-Total (mg/L)	0.0114	0.00249	0.00022	0.00068	0.00017
Arsenic (As)-Total (mg/L)	0.0141	0.0224	0.00327	0.0732	0.00258
Barium (Ba)-Total (mg/L)	0.00655	0.0766	0.0654	0.0674	0.0642
Beryllium (Be)-Total (mg/L)	0.000031	0.000092	0.000024	<0.000020	0.000020
Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	0.000065	<0.000050	<0.000050
Boron (B)-Total (mg/L)	0.022	0.012	<0.010	0.061	<0.010
Cadmium (Cd)-Total (mg/L)	0.0176	0.000294	0.0000767	0.000487	0.0000714
Calcium (Ca)-Total (mg/L)	121	112	21.6	256	21.7
Chromium (Cr)-Total (mg/L)	0.00010	0.00455	0.00056	0.00056	0.00057
Cobalt (Co)-Total (mg/L)	0.00171	0.00192	0.00027	0.00769	0.00024
Copper (Cu)-Total (mg/L)	0.0608	0.00796	0.00299	0.00447	0.00247
Iron (Fe)-Total (mg/L)	0.216	7.20	0.659	17.5	0.544
Lead (Pb)-Total (mg/L)	0.00283	0.00295	0.00208	0.000536	0.00155
Lithium (Li)-Total (mg/L)	0.0023	0.0044	<0.0010	0.0013	<0.0010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1608599-16	L1608599-17	L1608599-18	L1608599-19	L1608599-20
Description	Water	Water	Water	Water	Water
Sampled Date		05-MAY-15	05-MAY-15	05-MAY-15	06-MAY-15
Sampled Time		14:45	16:50	15:55	08:45
Client ID	0146-1505-TRAVEL BLANK	0146-150505-019	0146-150505-026	0146-150505-027	0146-150506-001
Grouping / **Analyte**					
WATER					
Physical Tests					
Conductivity (uS/cm)	<2.0	173	210	901	373
Hardness (as CaCO3) (mg/L)		87.8	99.4	501	180
pH (pH)	5.55	7.74	7.75	8.20	5.71
Total Suspended Solids (mg/L)	<3.0	9.3	17.3	148	<3.0
Total Dissolved Solids (mg/L)	<1.0	106	121	621	231
Anions and Nutrients					
Alkalinity, Bicarbonate (as CaCO3) (mg/L)	<1.0	39.2	40.6	125	3.5
Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3) (mg/L)	<1.0	39.2	40.6	125	3.5
Ammonia, Total (as N) (mg/L)	<0.0050	0.0078	0.0085	0.537	0.0066
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<1.0 DLA	<0.50
Fluoride (F) (mg/L)	<0.020	0.056	0.057	0.046	0.054
Nitrate (as N) (mg/L)	0.0094	<0.0050	0.0104	0.047	<0.0050
Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	0.0024	<0.0010
Sulfate (SO4) (mg/L)	0.43	46.0	55.5	360	162
Anion Sum (meq/L)	<0.10	1.74	1.97	10.0	3.45
Cation Sum (meq/L)	<0.10	1.94	2.18	10.6	3.78
Cation - Anion Balance (%)	-55.0	5.4	5.0	2.7	4.6
Cyanides					
Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanate (mg/L)	<0.20	0.26	0.28	0.21	0.21
Thiocyanate (SCN) (mg/L)	<0.50	1.18	1.09	0.66	1.18
Total Metals					
Aluminum (Al)-Total (mg/L)	<0.0030	1.25	0.990	1.89	0.273
Antimony (Sb)-Total (mg/L)	<0.00010	0.00065	0.00113	0.00231	<0.00010
Arsenic (As)-Total (mg/L)	<0.00010	0.00942	0.0156	0.0335	0.00163
Barium (Ba)-Total (mg/L)	<0.000050	0.0491	0.0488	0.0746	0.0171
Beryllium (Be)-Total (mg/L)	<0.000020	0.000050	0.000051	0.000078	0.000034
Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	0.000072	<0.000050	<0.000050
Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	0.014	<0.010
Cadmium (Cd)-Total (mg/L)	<0.0000050	0.000138	0.00179	0.000348	0.00318
Calcium (Ca)-Total (mg/L)	<0.050	26.7	30.3	130	46.6
Chromium (Cr)-Total (mg/L)	<0.00010	0.00111	0.00104	0.00373	0.00020
Cobalt (Co)-Total (mg/L)	<0.00010	0.00072	0.00066	0.00250	<0.00010
Copper (Cu)-Total (mg/L)	<0.00050	0.00481	0.0126	0.00762	0.00274
Iron (Fe)-Total (mg/L)	<0.010	1.44	1.31	8.78	0.150
Lead (Pb)-Total (mg/L)	<0.000050	0.00328	0.00694	0.00390	0.000059
Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	0.0010	0.0036	<0.0010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1608599-21 Water 06-MAY-15 08:15 0146-150506-006	L1608599-22 Water 06-MAY-15 09:45 0146-150506-004	L1608599-23 Water 06-MAY-15 09:25 0146-150506-002	L1608599-24 Water 06-MAY-15 11:10 0146-150506-005	L1608599-25 Water 06-MAY-15 08:20 0146-150506-003
WATER						
Physical Tests	Conductivity (uS/cm)	56.7	1160	863	181	659
	Hardness (as CaCO3) (mg/L)	30.5	702	505	75.8	301
	pH (pH)	6.12	8.31	8.33	7.93	5.03
	Total Suspended Solids (mg/L)	<3.0	279	<3.0	15.3	23.3
	Total Dissolved Solids (mg/L)	27.8	844	594	103	423
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	5.6	159	160	47.0	<1.0
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	1.6	3.5	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	5.6	161	163	47.0	<1.0
	Ammonia, Total (as N) (mg/L)	0.0060	0.0111	0.109	0.0073	0.0130
	Chloride (Cl) (mg/L)	<0.50	<1.0 DLA	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.050	0.112	0.124	0.053	0.065
	Nitrate (as N) (mg/L)	<0.0050	0.030	<0.0050	<0.0050	0.0080
	Nitrite (as N) (mg/L)	<0.0010	<0.0020 DLA	<0.0010	<0.0010	<0.0010
	Sulfate (SO4) (mg/L)	10.2	499	314	34.8	316
	Anion Sum (meq/L)	0.33	13.6	9.80	1.67	6.58
	Cation Sum (meq/L)	0.73	14.3	10.4	1.86	6.28
	Cation - Anion Balance (%)	38.3	2.6	3.0	5.5	-2.3
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanate (mg/L)	0.24	<0.20	<0.20	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	1.49	<0.50	<0.50	0.90	1.01
Total Metals	Aluminum (Al)-Total (mg/L)	0.279	6.05	0.0207	0.225	0.396
	Antimony (Sb)-Total (mg/L)	<0.00010	0.101	0.00849	0.00093	<0.00010
	Arsenic (As)-Total (mg/L)	0.00134	0.806	0.0107	0.0128	0.00212
	Barium (Ba)-Total (mg/L)	0.0384	0.128	0.0237	0.0166	0.0179
	Beryllium (Be)-Total (mg/L)	0.000023	0.000290	<0.000020	<0.000020	0.000041
	Bismuth (Bi)-Total (mg/L)	<0.000050	0.00429	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	0.033	0.013	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000622	0.0128	0.00126	0.0000396	0.00714
	Calcium (Ca)-Total (mg/L)	9.23	171	130	21.1	78.1
	Chromium (Cr)-Total (mg/L)	0.00021	0.00782	0.00012	0.00041	0.00024
	Cobalt (Co)-Total (mg/L)	<0.00010	0.00469	0.00029	0.00017	0.00012
	Copper (Cu)-Total (mg/L)	0.00360	0.104	0.00245	0.00261	0.00260
	Iron (Fe)-Total (mg/L)	0.107	18.4	0.255	0.434	0.185
	Lead (Pb)-Total (mg/L)	<0.000050	0.698	0.000530	0.000461	0.000113
	Lithium (Li)-Total (mg/L)	<0.0010	0.0088	0.0046	<0.0010	0.0012

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1608599-26 Water 06-MAY-15 10:23 0146-150506-031	L1608599-27 Water 06-MAY-15 10:25 0146-150506-032	L1608599-28 Water 06-MAY-15 12:45 0146-150506-010	L1608599-29 Water 06-MAY-15 11:55 0146-150506-009	L1608599-30 Water 06-MAY-15 12:00 0146-150506-016
WATER						
Physical Tests	Conductivity (uS/cm)	143	1050	1820	2750	270
	Hardness (as CaCO3) (mg/L)	68.9	605	692	1830	165
	pH (pH)	7.50	8.24	3.31	4.63	7.98
	Total Suspended Solids (mg/L)	4.0	4.7	136	136	<3.0
	Total Dissolved Solids (mg/L)	82.4	714	1340	2700	174
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	29.8	193	<1.0	<1.0	56.7
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	29.8	193	<1.0	<1.0	56.7
	Ammonia, Total (as N) (mg/L)	0.0081	0.0292	0.0649	<0.0050	0.184
	Chloride (Cl) (mg/L)	<0.50	<1.0 DLA	<2.5 DLA	<5.0	<0.50
	Fluoride (F) (mg/L)	0.069	0.191	0.24	0.78	0.302
	Nitrate (as N) (mg/L)	<0.0050	<0.010 DLA	<0.025 DLA	<0.050 DLA	0.0910
	Nitrite (as N) (mg/L)	<0.0010	<0.0020 DLA	<0.0050 DLA	<0.010 DLA	0.0077
	Sulfate (SO4) (mg/L)	32.3	379	1010	2030	77.2
	Anion Sum (meq/L)	1.27	11.8	21.1	42.3	2.76
	Cation Sum (meq/L)	1.61	12.5	19.1	39.4	3.40
	Cation - Anion Balance (%)	11.9	3.1	-5.0	-3.5	10.4
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanate (mg/L)	0.27	<0.20	0.52	<0.20	0.25
	Thiocyanate (SCN) (mg/L)	1.44	<0.50	<0.50	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.498	0.0778	3.70	7.94	0.0944
	Antimony (Sb)-Total (mg/L)	0.00191	0.0157	0.00683	0.00147	0.00212
	Arsenic (As)-Total (mg/L)	0.0131	0.0780	0.194	0.0462	0.0165
	Barium (Ba)-Total (mg/L)	0.0307	0.0154	0.0203	0.0236	0.00551
	Beryllium (Be)-Total (mg/L)	0.000037	<0.000020	0.00078	0.00201	<0.000020
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	0.00172	0.0473	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.050 DLA	<0.050 DLA	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000634	0.00415	0.271	0.306	0.000268
	Calcium (Ca)-Total (mg/L)	20.9	162	134	386	41.4
	Chromium (Cr)-Total (mg/L)	0.00047	0.00016	0.00056	0.00236	0.00014
	Cobalt (Co)-Total (mg/L)	0.00018	0.00100	0.0486	0.0277	<0.00010
	Copper (Cu)-Total (mg/L)	0.00681	0.00344	0.455	1.47	0.00332
	Iron (Fe)-Total (mg/L)	0.448	1.51	49.8	1.14	0.114
	Lead (Pb)-Total (mg/L)	0.00217	0.00371	0.0659	0.00998	0.00236
	Lithium (Li)-Total (mg/L)	<0.0010	0.0086	0.0056	0.0099	0.0015

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1608599-31				
	Description	Water				
	Sampled Date	06-MAY-15				
	Sampled Time	13:20				
	Client ID	0146-150506-018				
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	2650				
	Hardness (as CaCO3) (mg/L)	2520				
	pH (pH)	7.85				
	Total Suspended Solids (mg/L)	5.3				
	Total Dissolved Solids (mg/L)	2700				
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	49.7				
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0				
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0				
	Alkalinity, Total (as CaCO3) (mg/L)	49.7				
	Ammonia, Total (as N) (mg/L)	0.0246				
	Chloride (Cl) (mg/L)	<5.0 DLA				
	Fluoride (F) (mg/L)	0.37				
	Nitrate (as N) (mg/L)	0.056				
	Nitrite (as N) (mg/L)	<0.010 DLA				
	Sulfate (SO4) (mg/L)	1790				
	Anion Sum (meq/L)	38.2				
	Cation Sum (meq/L)	50.6				
	Cation - Anion Balance (%)	14.0				
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050				
	Cyanide, Total (mg/L)	<0.0050				
	Cyanate (mg/L)	<0.20				
	Thiocyanate (SCN) (mg/L)	<0.50				
Total Metals	Aluminum (Al)-Total (mg/L)	0.0097				
	Antimony (Sb)-Total (mg/L)	0.00192				
	Arsenic (As)-Total (mg/L)	0.00547				
	Barium (Ba)-Total (mg/L)	0.00698				
	Beryllium (Be)-Total (mg/L)	<0.000040 DLA				
	Bismuth (Bi)-Total (mg/L)	<0.00010 DLA				
	Boron (B)-Total (mg/L)	<0.020 DLA				
	Cadmium (Cd)-Total (mg/L)	0.00583				
	Calcium (Ca)-Total (mg/L)	552				
	Chromium (Cr)-Total (mg/L)	0.00031				
	Cobalt (Co)-Total (mg/L)	<0.00020 DLA				
	Copper (Cu)-Total (mg/L)	0.0021				
	Iron (Fe)-Total (mg/L)	0.022				
	Lead (Pb)-Total (mg/L)	0.00053				
	Lithium (Li)-Total (mg/L)	0.0056				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1608599-1	L1608599-2	L1608599-3	L1608599-4	L1608599-5
Description	Water	Water	Water	Water	Water
Sampled Date	04-MAY-15	04-MAY-15	04-MAY-15	04-MAY-15	05-MAY-15
Sampled Time	16:45	16:05	18:30	13:30	08:18
Client ID	0146-150504-036	0146-150504-034	0146-150504-033	0146-150504-035	0146-150505-025
Grouping / **Analyte**					
WATER					
Total Metals					
Magnesium (Mg)-Total (mg/L)	9.63	9.35	20.0	8.87	5.67
Manganese (Mn)-Total (mg/L)	0.0961	0.0870	0.322	0.0721	0.153
Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	0.0000151	0.0000062	0.0000101
Molybdenum (Mo)-Total (mg/L)	0.000376	0.000339	0.000200	0.000317	0.000197
Nickel (Ni)-Total (mg/L)	0.00073	0.00066	<0.00050	0.00109	<0.00050
Phosphorus (P)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	0.066
Potassium (K)-Total (mg/L)	1.40	1.34	2.39	1.62	1.74
Rubidium (Rb)-Total (mg/L)	0.00099	0.00109	0.00244	0.00120	0.00231
Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	0.000074	<0.000050	0.000141
Silicon (Si)-Total (mg/L)	4.97	4.77	3.65	5.16	2.07
Silver (Ag)-Total (mg/L)	0.000024	0.000023	0.000117	0.000030	0.000234
Sodium (Na)-Total (mg/L)	2.58	2.41	0.472	2.44	0.291
Strontium (Sr)-Total (mg/L)	0.228	0.229	0.127	0.210	0.134
Sulfur (S)-Total (mg/L)	16.9	16.6	127	15.5	53.0
Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	0.000021	<0.000010	0.000046
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total (mg/L)	0.00889	0.00693	<0.00030	0.00862	0.00468
Uranium (U)-Total (mg/L)	0.000391	0.000379	0.000199	0.000363	0.000173
Vanadium (V)-Total (mg/L)	0.00083	0.00076	<0.00050	0.00090	0.00080
Zinc (Zn)-Total (mg/L)	0.0078	0.0071	0.130	0.0095	0.0667
Zirconium (Zr)-Total (mg/L)					
Dissolved Metals					
Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Aluminum (Al)-Dissolved (mg/L)	0.0206	0.0214	0.0014	0.0550	0.0073
Antimony (Sb)-Dissolved (mg/L)	0.00027	0.00029	0.00614	0.00027	0.00088
Arsenic (As)-Dissolved (mg/L)	0.00232	0.00232	0.0525	0.00206	0.00446
Barium (Ba)-Dissolved (mg/L)	0.0535	0.0563	0.00205	0.0579	0.00804
Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved (mg/L)	0.0000460	0.0000417	0.00203	0.0000398	0.00103
Calcium (Ca)-Dissolved (mg/L)	29.4	30.1	125	26.5	56.4
Chromium (Cr)-Dissolved (mg/L)	0.00013	0.00012	<0.00010	0.00017	<0.00010
Cobalt (Co)-Dissolved (mg/L)	0.00014	0.00013	<0.00010	0.00017	0.00020
Copper (Cu)-Dissolved (mg/L)	0.00155	0.00152	0.00068	0.00197	0.0227
Iron (Fe)-Dissolved (mg/L)	0.079	0.082	<0.010	0.189	0.010
Lead (Pb)-Dissolved (mg/L)	0.000081	0.000087	0.000055	0.000095	0.000105

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1608599-6	L1608599-7	L1608599-8	L1608599-9	L1608599-10
	Description	Water	Water	Water	Water	Water
	Sampled Date	04-MAY-15	05-MAY-15	04-MAY-15	05-MAY-15	05-MAY-15
	Sampled Time	13:25	13:45	16:25	10:35	10:20
	Client ID	0146-150504-037	0146-150505-020	0146-150504-FIELD BLANK	0146-150505-024	0146-150505-023
Grouping	**Analyte**					
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	8.53	7.51	<0.10	36.3	37.9
	Manganese (Mn)-Total (mg/L)	0.0687	0.274	<0.00010	1.30	1.39
	Mercury (Hg)-Total (mg/L)	0.0000064	0.0000117	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	0.000322	0.000741	<0.000050	0.000283	0.000288
	Nickel (Ni)-Total (mg/L)	0.00103	0.00166	<0.00050	0.00090	0.00098
	Phosphorus (P)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Total (mg/L)	1.52	1.62	<0.10	2.96	3.08
	Rubidium (Rb)-Total (mg/L)	0.00123	0.00300	<0.00020	0.00174	0.00176
	Selenium (Se)-Total (mg/L)	<0.000050	0.000052	<0.000050	0.000067	0.000052
	Silicon (Si)-Total (mg/L)	4.79	7.75	<0.050	4.14	4.35
	Silver (Ag)-Total (mg/L)	0.000026	0.000156	<0.000010	0.000044	0.000043
	Sodium (Na)-Total (mg/L)	2.38	2.18	<0.050	6.66	6.95
	Strontium (Sr)-Total (mg/L)	0.200	0.221	<0.00020	0.377	0.389
	Sulfur (S)-Total (mg/L)	14.6	10.6	<0.50	118	123
	Thallium (Tl)-Total (mg/L)	<0.000010	0.000032	<0.000010	0.000011	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00830	0.0413	<0.00030	<0.0012 DLM	0.00106
	Uranium (U)-Total (mg/L)	0.000342	0.000903	<0.000010	0.00115	0.00126
	Vanadium (V)-Total (mg/L)	0.00080	0.00339	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	0.0094	0.0227	<0.0030	0.0233	0.0258
	Zirconium (Zr)-Total (mg/L)	<0.00030				
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0542	0.0348	<0.0010	0.0234	0.0217
	Antimony (Sb)-Dissolved (mg/L)	0.00025	0.00015	<0.00010	0.00221	0.00230
	Arsenic (As)-Dissolved (mg/L)	0.00204	0.00120	<0.00010	0.0113	0.0118
	Barium (Ba)-Dissolved (mg/L)	0.0563	0.0619	<0.000050	0.0460	0.0446
	Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	0.013	0.012
	Cadmium (Cd)-Dissolved (mg/L)	0.0000490	0.0000913	<0.0000050	0.000140	0.000110
	Calcium (Ca)-Dissolved (mg/L)	26.3	25.8	<0.050	122	125
	Chromium (Cr)-Dissolved (mg/L)	0.00016	0.00017	<0.00010	0.00013	0.00013
	Cobalt (Co)-Dissolved (mg/L)	0.00016	0.00020	<0.00010	0.00116	0.00121
	Copper (Cu)-Dissolved (mg/L)	0.00197	0.00225	<0.00020	0.00155	0.00153
	Iron (Fe)-Dissolved (mg/L)	0.185	0.104	<0.010	0.482	0.492
	Lead (Pb)-Dissolved (mg/L)	0.000096	0.000178	<0.000050	0.000255	0.000267

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1608599-11 Water 05-MAY-15 16:46 0146-150505-030	L1608599-12 Water 05-MAY-15 17:15 0146-150505-029	L1608599-13 Water 05-MAY-15 12:20 0146-150505-022	L1608599-14 Water 05-MAY-15 16:25 0146-150505-028	L1608599-15 Water 05-MAY-15 11:35 0146-150505-021
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	12.0	40.0	6.87	53.8	6.97
	Manganese (Mn)-Total (mg/L)	1.74	0.661	0.105	6.76	0.0973
	Mercury (Hg)-Total (mg/L)	0.0000060	<0.000025 DLM	0.0000063	<0.0000050	0.0000058
	Molybdenum (Mo)-Total (mg/L)	0.000446	0.000286	0.000448	0.00104	0.000407
	Nickel (Ni)-Total (mg/L)	0.00177	0.00403	0.00089	0.00273	0.00085
	Phosphorus (P)-Total (mg/L)	<0.050	0.155	<0.050	<0.050	<0.050
	Potassium (K)-Total (mg/L)	3.60	3.08	1.17	5.85	1.21
	Rubidium (Rb)-Total (mg/L)	0.00503	0.00440	0.00144	0.00158	0.00108
	Selenium (Se)-Total (mg/L)	0.000052	0.000165	<0.000050	0.000190	0.000051
	Silicon (Si)-Total (mg/L)	1.05	8.16	5.11	7.56	5.05
	Silver (Ag)-Total (mg/L)	0.000074	0.000055	0.000033	0.000075	0.000023
	Sodium (Na)-Total (mg/L)	3.28	4.13	2.02	32.3	1.99
	Strontium (Sr)-Total (mg/L)	0.232	0.362	0.222	0.758	0.221
	Sulfur (S)-Total (mg/L)	121	112	6.27	266	6.04
	Thallium (Tl)-Total (mg/L)	0.000061	0.000044	0.000013	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.00030	0.142	0.0124	0.00257	0.0103
	Uranium (U)-Total (mg/L)	0.000284	0.00162	0.000544	0.00149	0.000499
	Vanadium (V)-Total (mg/L)	<0.00050	0.0102	0.00119	0.00238	0.00098
	Zinc (Zn)-Total (mg/L)	0.920	0.0507	0.0069	0.0123	0.0059
	Zirconium (Zr)-Total (mg/L)					
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0052	0.0891	0.0385	0.0174	0.0394
	Antimony (Sb)-Dissolved (mg/L)	0.0109	0.00206	<0.00010	0.00052	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00532	0.00502	0.00065	0.0497	0.00058
	Barium (Ba)-Dissolved (mg/L)	0.00575	0.0325	0.0605	0.0644	0.0598
	Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	0.019	<0.010	<0.010	0.057	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.0171	0.0000863	0.0000502	0.000251	0.0000411
	Calcium (Ca)-Dissolved (mg/L)	119	116	22.1	254	21.5
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	0.00012	<0.00010	0.00036	0.00014
	Cobalt (Co)-Dissolved (mg/L)	0.00163	0.00044	0.00011	0.00745	0.00011
	Copper (Cu)-Dissolved (mg/L)	0.0449	0.00150	0.00195	0.00178	0.00196
	Iron (Fe)-Dissolved (mg/L)	0.011	0.740	0.111	15.3	0.110
	Lead (Pb)-Dissolved (mg/L)	0.000087	0.000075	0.000101	<0.000050	0.000089

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1608599-16	L1608599-17	L1608599-18	L1608599-19	L1608599-20
Description	Water	Water	Water	Water	Water
Sampled Date		05-MAY-15	05-MAY-15	05-MAY-15	06-MAY-15
Sampled Time		14:45	16:50	15:55	08:45
Client ID	0146-1505-TRAVEL BLANK	0146-150505-019	0146-150505-026	0146-150505-027	0146-150506-001
Grouping / **Analyte**					
WATER					
Total Metals Magnesium (Mg)-Total (mg/L)	<0.10	5.62	6.38	44.1	16.7
Manganese (Mn)-Total (mg/L)	<0.00010	0.235	0.220	1.52	0.143
Mercury (Hg)-Total (mg/L)	<0.0000050	0.0000163	0.0000128	<0.000025 DLM	0.0000100
Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000128	0.000126	0.000381	<0.000050
Nickel (Ni)-Total (mg/L)	<0.00050	0.00144	0.00156	0.00377	0.00391
Phosphorus (P)-Total (mg/L)	<0.050	<0.050	<0.050	0.131	<0.050
Potassium (K)-Total (mg/L)	<0.10	2.36	2.42	3.36	2.11
Rubidium (Rb)-Total (mg/L)	<0.00020	0.00315	0.00297	0.00361	0.00244
Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.000050	0.000145	<0.000050
Silicon (Si)-Total (mg/L)	<0.050	4.93	4.52	7.40	3.16
Silver (Ag)-Total (mg/L)	<0.000010	0.000065	0.000103	0.000080	<0.000010
Sodium (Na)-Total (mg/L)	<0.050	1.84	1.94	7.55	1.39
Strontium (Sr)-Total (mg/L)	<0.00020	0.192	0.207	0.421	0.119
Sulfur (S)-Total (mg/L)	<0.50	16.4	19.4	133	60.6
Thallium (Tl)-Total (mg/L)	<0.000010	0.000018	0.000017	0.000036	<0.000010
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total (mg/L)	<0.00030	0.0327	0.0281	0.0991	0.00086
Uranium (U)-Total (mg/L)	<0.000010	0.000190	0.000192	0.00176	0.000013
Vanadium (V)-Total (mg/L)	<0.00050	0.00248	0.00202	0.00875	<0.00050
Zinc (Zn)-Total (mg/L)	<0.0030	0.0133	0.167	0.0511	1.13
Zirconium (Zr)-Total (mg/L)					
Dissolved Metals Dissolved Mercury Filtration Location		FIELD	FIELD	FIELD	FIELD
Dissolved Metals Filtration Location		FIELD	FIELD	FIELD	FIELD
Aluminum (Al)-Dissolved (mg/L)		0.205	0.186	0.0737	0.265
Antimony (Sb)-Dissolved (mg/L)		0.00029	0.00039	0.00173	<0.00010
Arsenic (As)-Dissolved (mg/L)		0.00353	0.00373	0.00712	0.00160
Barium (Ba)-Dissolved (mg/L)		0.0402	0.0391	0.0356	0.0159
Beryllium (Be)-Dissolved (mg/L)		0.000028	0.000029	<0.000020	0.000031
Bismuth (Bi)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved (mg/L)		<0.010	<0.010	0.014	<0.010
Cadmium (Cd)-Dissolved (mg/L)		0.000102	0.00152	0.0000772	0.00320
Calcium (Ca)-Dissolved (mg/L)		26.3	29.7	127	45.4
Chromium (Cr)-Dissolved (mg/L)		0.00024	0.00020	0.00017	0.00015
Cobalt (Co)-Dissolved (mg/L)		0.00040	0.00033	0.00128	<0.00010
Copper (Cu)-Dissolved (mg/L)		0.00333	0.00997	0.00153	0.00261
Iron (Fe)-Dissolved (mg/L)		0.339	0.296	0.964	0.128
Lead (Pb)-Dissolved (mg/L)		0.000200	0.000685	0.000066	<0.000050

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1608599-21	L1608599-22	L1608599-23	L1608599-24	L1608599-25
Description	Water	Water	Water	Water	Water
Sampled Date	06-MAY-15	06-MAY-15	06-MAY-15	06-MAY-15	06-MAY-15
Sampled Time	08:15	09:45	09:25	11:10	08:20
Client ID	0146-150506-006	0146-150506-004	0146-150506-002	0146-150506-005	0146-150506-003
Grouping / **Analyte**					
WATER					
Total Metals					
Magnesium (Mg)-Total (mg/L)	1.92	63.4	42.5	5.64	33.8
Manganese (Mn)-Total (mg/L)	0.00323	1.04	0.873	0.0154	0.399
Mercury (Hg)-Total (mg/L)	0.0000153	0.000112	<0.0000050	0.0000101	0.0000113
Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000979	0.000209	0.000056	<0.000050
Nickel (Ni)-Total (mg/L)	0.00156	0.00698	0.00077	0.00057	0.00439
Phosphorus (P)-Total (mg/L)	<0.050	0.230	<0.050	0.080	<0.050
Potassium (K)-Total (mg/L)	1.77	7.12	3.98	11.6	2.38
Rubidium (Rb)-Total (mg/L)	0.00089	0.0162	0.00357	0.00357	0.00334
Selenium (Se)-Total (mg/L)	<0.000050	0.000312	<0.000050	0.000066	<0.000050
Silicon (Si)-Total (mg/L)	2.63	19.1	5.73	6.28	3.21
Silver (Ag)-Total (mg/L)	<0.000010	0.0106	0.000021	0.000054	0.000013
Sodium (Na)-Total (mg/L)	0.990	4.08	3.65	0.879	1.92
Strontium (Sr)-Total (mg/L)	0.0441	0.339	0.300	0.0597	0.192
Sulfur (S)-Total (mg/L)	4.24	184	119	12.9	115
Thallium (Tl)-Total (mg/L)	<0.000010	0.000461	0.000015	<0.000010	<0.000010
Tin (Sn)-Total (mg/L)	<0.00010	0.00045	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total (mg/L)	0.00091	0.197	0.00062	0.0119	0.00258
Uranium (U)-Total (mg/L)	0.000011	0.00271	0.00157	0.000033	0.000012
Vanadium (V)-Total (mg/L)	<0.00050	0.0257	<0.00050	0.00106	<0.00050
Zinc (Zn)-Total (mg/L)	0.0099	1.06	0.235	0.0056	2.28
Zirconium (Zr)-Total (mg/L)					
Dissolved Metals					
Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Aluminum (Al)-Dissolved (mg/L)	0.270	0.0129	0.0109	0.0168	0.336
Antimony (Sb)-Dissolved (mg/L)	<0.00010	0.0299	0.00842	0.00083	<0.00010
Arsenic (As)-Dissolved (mg/L)	0.00134	0.0619	0.00974	0.0106	0.00154
Barium (Ba)-Dissolved (mg/L)	0.0381	0.0164	0.0237	0.0147	0.0142
Beryllium (Be)-Dissolved (mg/L)	0.000022	<0.000020	<0.000020	<0.000020	0.000035
Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved (mg/L)	<0.010	0.027	0.013	<0.010	<0.010
Cadmium (Cd)-Dissolved (mg/L)	0.0000649	0.00371	0.00102	0.0000336	0.00609
Calcium (Ca)-Dissolved (mg/L)	9.09	174	129	21.1	69.0
Chromium (Cr)-Dissolved (mg/L)	0.00018	<0.00010	<0.00010	0.00011	0.00015
Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00026	0.00029	<0.00010	<0.00010
Copper (Cu)-Dissolved (mg/L)	0.00346	0.0111	0.00209	0.00231	0.00245
Iron (Fe)-Dissolved (mg/L)	0.100	0.028	0.207	0.060	0.058
Lead (Pb)-Dissolved (mg/L)	<0.000050	0.00170	0.000193	0.000134	<0.000050

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1608599-26	L1608599-27	L1608599-28	L1608599-29	L1608599-30
	Description	Water	Water	Water	Water	Water
	Sampled Date	06-MAY-15	06-MAY-15	06-MAY-15	06-MAY-15	06-MAY-15
	Sampled Time	10:23	10:25	12:45	11:55	12:00
	Client ID	0146-150506-031	0146-150506-032	0146-150506-010	0146-150506-009	0146-150506-016
Grouping	**Analyte**					
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	4.49	53.5	81.6	198	9.80
	Manganese (Mn)-Total (mg/L)	0.0292	1.23	36.5	26.2	0.0131
	Mercury (Hg)-Total (mg/L)	0.0000177	<0.0000050	0.0000222	0.0000349	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	0.000064	0.000318	<0.00025 DLA	0.00179	0.000140
	Nickel (Ni)-Total (mg/L)	0.00125	0.00227	0.0118	0.0231	<0.00050
	Phosphorus (P)-Total (mg/L)	0.062	<0.050	0.364	0.055	<0.050
	Potassium (K)-Total (mg/L)	6.12	3.53	4.19	2.03	2.54
	Rubidium (Rb)-Total (mg/L)	0.00229	0.00462	0.0062	0.0038	0.00483
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	<0.00025 DLA	0.00028	0.000056
	Silicon (Si)-Total (mg/L)	4.76	6.36	4.23	4.95	1.47
	Silver (Ag)-Total (mg/L)	0.000078	0.000052	0.00194	0.000711	0.000053
	Sodium (Na)-Total (mg/L)	0.798	4.40	0.27	24.9	0.290
	Strontium (Sr)-Total (mg/L)	0.0582	0.364	0.208	0.712	0.108
	Sulfur (S)-Total (mg/L)	12.2	141	309	673	27.8
	Thallium (Tl)-Total (mg/L)	0.000018	0.000090	0.000129	0.000099	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00050 DLA	0.00139	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00724	0.00319	0.0016	<0.0048 DLM	0.00069
	Uranium (U)-Total (mg/L)	0.000061	0.00343	0.000706	0.000247	0.000185
	Vanadium (V)-Total (mg/L)	0.00096	<0.00050	<0.0025 DLA	<0.0025 DLA	<0.00050
	Zinc (Zn)-Total (mg/L)	0.0794	1.11	22.9	23.8	0.0124
	Zirconium (Zr)-Total (mg/L)					
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.312	0.0243	2.98	7.17	0.0050
	Antimony (Sb)-Dissolved (mg/L)	0.00159	0.0155	<0.00050 DLA	<0.00050 DLA	0.00209
	Arsenic (As)-Dissolved (mg/L)	0.00991	0.0596	0.0136	0.00214	0.0159
	Barium (Ba)-Dissolved (mg/L)	0.0271	0.0146	0.00336	0.0172	0.00617
	Beryllium (Be)-Dissolved (mg/L)	0.000032	<0.000020	0.00068	0.00169	<0.000020
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.00025 DLA	0.00726	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.050 DLA	<0.050 DLA	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000560	0.00153	0.278	0.318	0.000305
	Calcium (Ca)-Dissolved (mg/L)	20.4	154	136	395	47.7
	Chromium (Cr)-Dissolved (mg/L)	0.00029	<0.00010	<0.00050 DLA	<0.00050 DLA	0.00011
	Cobalt (Co)-Dissolved (mg/L)	0.00014	0.00089	0.0513	0.0276	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00651	0.00224	0.433	1.45	0.00343
	Iron (Fe)-Dissolved (mg/L)	0.245	1.08	42.5	0.116	<0.010
	Lead (Pb)-Dissolved (mg/L)	0.000765	0.000390	0.00223	0.00116	0.000106

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1608599-31				
	Description	Water				
	Sampled Date	06-MAY-15				
	Sampled Time	13:20				
	Client ID	0146-150506-018				
Grouping	**Analyte**					
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	171				
	Manganese (Mn)-Total (mg/L)	0.0660				
	Mercury (Hg)-Total (mg/L)	0.0000063				
	Molybdenum (Mo)-Total (mg/L)	0.00011				
	Nickel (Ni)-Total (mg/L)	<0.0010 DLA				
	Phosphorus (P)-Total (mg/L)	<0.050				
	Potassium (K)-Total (mg/L)	4.54				
	Rubidium (Rb)-Total (mg/L)	0.00268				
	Selenium (Se)-Total (mg/L)	0.00031				
	Silicon (Si)-Total (mg/L)	1.85				
	Silver (Ag)-Total (mg/L)	0.000049				
	Sodium (Na)-Total (mg/L)	0.52				
	Strontium (Sr)-Total (mg/L)	0.769				
	Sulfur (S)-Total (mg/L)	680				
	Thallium (Tl)-Total (mg/L)	0.000053				
	Tin (Sn)-Total (mg/L)	<0.00020 DLA				
	Titanium (Ti)-Total (mg/L)	<0.00060 DLA				
	Uranium (U)-Total (mg/L)	0.00148				
	Vanadium (V)-Total (mg/L)	<0.0010 DLA				
	Zinc (Zn)-Total (mg/L)	0.272				
	Zirconium (Zr)-Total (mg/L)	<0.00060 DLA				
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD				
	Dissolved Metals Filtration Location	FIELD				
	Aluminum (Al)-Dissolved (mg/L)	0.0034				
	Antimony (Sb)-Dissolved (mg/L)	0.00230				
	Arsenic (As)-Dissolved (mg/L)	0.00596				
	Barium (Ba)-Dissolved (mg/L)	0.0101 DTC				
	Beryllium (Be)-Dissolved (mg/L)	<0.000040 DLA				
	Bismuth (Bi)-Dissolved (mg/L)	<0.00010 DLA				
	Boron (B)-Dissolved (mg/L)	<0.020 DLA				
	Cadmium (Cd)-Dissolved (mg/L)	0.00742 DTC				
	Calcium (Ca)-Dissolved (mg/L)	683				
	Chromium (Cr)-Dissolved (mg/L)	<0.00020 DLA				
	Cobalt (Co)-Dissolved (mg/L)	<0.00020 DLA				
	Copper (Cu)-Dissolved (mg/L)	0.00273				
	Iron (Fe)-Dissolved (mg/L)	<0.010				
	Lead (Pb)-Dissolved (mg/L)	<0.00010 DLA				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1608599-1 Water 04-MAY-15 16:45 0146-150504-036	L1608599-2 Water 04-MAY-15 16:05 0146-150504-034	L1608599-3 Water 04-MAY-15 18:30 0146-150504-033	L1608599-4 Water 04-MAY-15 13:30 0146-150504-035	L1608599-5 Water 05-MAY-15 08:18 0146-150505-025
WATER						
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	0.0026	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	9.16	9.37	19.1	8.57	5.37
	Manganese (Mn)-Dissolved (mg/L)	0.0803	0.0779	0.303	0.0610	0.136
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	0.0000081	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)	0.000318	0.000294	0.000212	0.000264	0.000149
	Nickel (Ni)-Dissolved (mg/L)	0.00056	0.00055	<0.00050	0.00087	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	1.30	1.34	2.32	1.48	1.41
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	0.000059	<0.000050	0.000116
	Silicon (Si)-Dissolved (mg/L)	4.39	4.48	3.50	4.47	0.678
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.51	2.44	0.562	2.37	0.312
	Strontium (Sr)-Dissolved (mg/L)	0.221	0.226	0.123	0.208	0.129
	Sulfur (S)-Dissolved (mg/L)	16.4	16.7	121	14.9	50.8
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	0.000016	<0.000010	0.000014
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00040	0.00038	<0.00030	0.00060	<0.00030
	Uranium (U)-Dissolved (mg/L)	0.000350	0.000365	0.000187	0.000317	0.000125
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0054	0.0056	0.124	0.0068	0.0364
	Zirconium (Zr)-Dissolved (mg/L)					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1608599-6 Water 04-MAY-15 13:25 0146-150504-037	L1608599-7 Water 05-MAY-15 13:45 0146-150505-020	L1608599-8 Water 04-MAY-15 16:25 0146-150504-FIELD BLANK	L1608599-9 Water 05-MAY-15 10:35 0146-150505-024	L1608599-10 Water 05-MAY-15 10:20 0146-150505-023
WATER						
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0018	0.0021
	Magnesium (Mg)-Dissolved (mg/L)	8.48	7.30	<0.10	38.9	39.4
	Manganese (Mn)-Dissolved (mg/L)	0.0613	0.228	<0.00010	1.34	1.34
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)	0.000262	0.000584	<0.000050	0.000252	0.000267
	Nickel (Ni)-Dissolved (mg/L)	0.00084	0.00081	<0.00050	0.00091	0.00095
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	1.45	1.23	<0.10	3.08	3.08
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Dissolved (mg/L)	4.39	4.52	<0.050	4.27	4.37
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	0.000015	0.000013
	Sodium (Na)-Dissolved (mg/L)	2.41	2.14	<0.050	6.78	6.90
	Strontium (Sr)-Dissolved (mg/L)	0.201	0.222	<0.00020	0.377	0.379
	Sulfur (S)-Dissolved (mg/L)	14.8	10.6	<0.50	118	119
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00065	0.00078	<0.00030	<0.00090 DLM	<0.00090 DLM
	Uranium (U)-Dissolved (mg/L)	0.000321	0.000773	<0.000010	0.00117	0.00119
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0061	0.0039	0.0013	0.0225	0.0237
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1608599-11 Water 05-MAY-15 16:46 0146-150505-030	L1608599-12 Water 05-MAY-15 17:15 0146-150505-029	L1608599-13 Water 05-MAY-15 12:20 0146-150505-022	L1608599-14 Water 05-MAY-15 16:25 0146-150505-028	L1608599-15 Water 05-MAY-15 11:35 0146-150505-021
WATER						
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	0.0023	0.0026	<0.0010	0.0012	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	11.8	42.5	7.01	53.9	6.92
	Manganese (Mn)-Dissolved (mg/L)	1.69	0.538	0.0884	6.67	0.0780
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)	0.000419	0.000162	0.000387	0.000922	0.000368
	Nickel (Ni)-Dissolved (mg/L)	0.00167	0.00082	0.00064	0.00262	0.00061
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	3.44	2.93	1.13	5.75	1.12
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	0.000193	<0.000050
	Silicon (Si)-Dissolved (mg/L)	1.00	4.40	4.60	7.40	4.61
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	3.24	3.99	2.02	31.6	2.02
	Strontium (Sr)-Dissolved (mg/L)	0.226	0.357	0.225	0.724	0.222
	Sulfur (S)-Dissolved (mg/L)	116	113	6.26	251	5.95
	Thallium (Tl)-Dissolved (mg/L)	0.000059	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00084	0.00056	<0.0015 DLM	0.00058
	Uranium (U)-Dissolved (mg/L)	0.000231	0.00145	0.000502	0.00143	0.000457
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.00140	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.899	0.0236	0.0030	0.0109	0.0059
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1608599-16	L1608599-17	L1608599-18	L1608599-19	L1608599-20
Description	Water	Water	Water	Water	Water
Sampled Date		05-MAY-15	05-MAY-15	05-MAY-15	06-MAY-15
Sampled Time		14:45	16:50	15:55	08:45
Client ID	0146-1505-TRAVEL BLANK	0146-150505-019	0146-150505-026	0146-150505-027	0146-150506-001
Grouping **Analyte**					
WATER					
Dissolved Metals Lithium (Li)-Dissolved (mg/L)		<0.0010	<0.0010	0.0023	<0.0010
Magnesium (Mg)-Dissolved (mg/L)		5.39	6.13	44.8	16.1
Manganese (Mn)-Dissolved (mg/L)		0.212	0.180	1.38	0.139
Mercury (Hg)-Dissolved (mg/L)		0.0000108	0.0000094	<0.0000050	0.0000107
Molybdenum (Mo)-Dissolved (mg/L)		0.000076	0.000073	0.000275	<0.000050
Nickel (Ni)-Dissolved (mg/L)		0.00089	0.00103	0.00108	0.00300
Phosphorus (P)-Dissolved (mg/L)		<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved (mg/L)		2.19	2.28	3.04	2.02
Selenium (Se)-Dissolved (mg/L)		<0.000050	<0.000050	0.000058	<0.000050
Silicon (Si)-Dissolved (mg/L)		3.24	3.38	4.28	3.11
Silver (Ag)-Dissolved (mg/L)		0.000016	0.000016	<0.000010	<0.000010
Sodium (Na)-Dissolved (mg/L)		1.87	1.96	7.51	1.37
Strontium (Sr)-Dissolved (mg/L)		0.193	0.210	0.413	0.117
Sulfur (S)-Dissolved (mg/L)		16.2	19.5	129	58.2
Thallium (Tl)-Dissolved (mg/L)		<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved (mg/L)		0.00270	0.00226	0.00086	0.00068
Uranium (U)-Dissolved (mg/L)		0.000168	0.000161	0.00160	<0.000010
Vanadium (V)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved (mg/L)		0.0066	0.138	0.0164	1.15
Zirconium (Zr)-Dissolved (mg/L)					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1608599-21 Water 06-MAY-15 08:15 0146-150506-006	L1608599-22 Water 06-MAY-15 09:45 0146-150506-004	L1608599-23 Water 06-MAY-15 09:25 0146-150506-002	L1608599-24 Water 06-MAY-15 11:10 0146-150506-005	L1608599-25 Water 06-MAY-15 08:20 0146-150506-003
WATER						
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	<0.0010	0.0058	0.0047	<0.0010	0.0012
	Magnesium (Mg)-Dissolved (mg/L)	1.90	65.2	44.4	5.63	31.4
	Manganese (Mn)-Dissolved (mg/L)	0.00280	0.285	0.867	0.0116	0.305
	Mercury (Hg)-Dissolved (mg/L)	0.0000131	<0.0000050	<0.0000050	0.0000095	0.0000104
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.000436	0.000197	<0.000050	<0.000050
	Nickel (Ni)-Dissolved (mg/L)	0.00145	0.00104	0.00081	<0.00050	0.00387
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	1.75	4.51	3.93	11.8	2.24
	Selenium (Se)-Dissolved (mg/L)	<0.000050	0.000113	<0.000050	0.000063	<0.000050
	Silicon (Si)-Dissolved (mg/L)	2.65	4.01	5.74	6.20	3.17
	Silver (Ag)-Dissolved (mg/L)	<0.000010	0.000029	0.000010	0.000033	<0.000010
	Sodium (Na)-Dissolved (mg/L)	0.987	3.97	3.67	0.910	1.82
	Strontium (Sr)-Dissolved (mg/L)	0.0435	0.327	0.300	0.0623	0.175
	Sulfur (S)-Dissolved (mg/L)	4.18	180	115	12.8	99.9
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	0.000046	0.000015	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00068	0.00079	0.00030	0.00032	0.00042
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.00235	0.00152	0.000019	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0111	0.275	0.238	0.0075	2.05
	Zirconium (Zr)-Dissolved (mg/L)					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1608599-26	L1608599-27	L1608599-28	L1608599-29	L1608599-30
	Description	Water	Water	Water	Water	Water
	Sampled Date	06-MAY-15	06-MAY-15	06-MAY-15	06-MAY-15	06-MAY-15
	Sampled Time	10:23	10:25	12:45	11:55	12:00
	Client ID	0146-150506-031	0146-150506-032	0146-150506-010	0146-150506-009	0146-150506-016
Grouping	**Analyte**					
WATER						
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	<0.0010	0.0080	<0.0050 DLA	0.0086	0.0017
	Magnesium (Mg)-Dissolved (mg/L)	4.37	53.4	85.6	205	11.2
	Manganese (Mn)-Dissolved (mg/L)	0.0233	1.17	37.1	26.9	0.00718
	Mercury (Hg)-Dissolved (mg/L)	0.0000179	<0.0000050	0.0000074	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)	0.000061	0.000281	<0.00025 DLA	0.00027	0.000146
	Nickel (Ni)-Dissolved (mg/L)	0.00117	0.00216	0.0112	0.0210	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	0.076	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	5.91	3.49	3.53	2.09	2.97
	Selenium (Se)-Dissolved (mg/L)	0.000055	<0.000050	<0.00025 DLA	<0.00025 DLA	0.000072
	Silicon (Si)-Dissolved (mg/L)	4.41	6.19	2.83	4.92	1.58
	Silver (Ag)-Dissolved (mg/L)	0.000033	<0.000010	0.000200	0.000367	0.000020
	Sodium (Na)-Dissolved (mg/L)	0.819	4.30	<0.25 DLA	4.66	0.361
	Strontium (Sr)-Dissolved (mg/L)	0.0579	0.349	0.181	0.649	0.124
	Sulfur (S)-Dissolved (mg/L)	12.0	130	302	660	31.9
	Thallium (Tl)-Dissolved (mg/L)	0.000012	0.000076	0.000055	0.000076	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00050 DLA	<0.00050 DLA	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00262	<0.00030	<0.0015 DLA	<0.0015 DLA	<0.00030
	Uranium (U)-Dissolved (mg/L)	0.000056	0.00313	0.000504	0.000162	0.000194
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0025 DLA	<0.0025 DLA	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0768	1.07	22.9	25.1	0.0181 DTC
	Zirconium (Zr)-Dissolved (mg/L)					

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1608599-31				
	Description	Water				
	Sampled Date	06-MAY-15				
	Sampled Time	13:20				
	Client ID	0146-150506-018				
Grouping	**Analyte**					
WATER						
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	0.0067				
	Magnesium (Mg)-Dissolved (mg/L)	199				
	Manganese (Mn)-Dissolved (mg/L)	0.108 DTC				
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050				
	Molybdenum (Mo)-Dissolved (mg/L)	<0.00010 DLA				
	Nickel (Ni)-Dissolved (mg/L)	<0.0010 DLA				
	Phosphorus (P)-Dissolved (mg/L)	<0.050				
	Potassium (K)-Dissolved (mg/L)	5.89				
	Selenium (Se)-Dissolved (mg/L)	0.00037				
	Silicon (Si)-Dissolved (mg/L)	2.29				
	Silver (Ag)-Dissolved (mg/L)	<0.000020 DLA				
	Sodium (Na)-Dissolved (mg/L)	0.61				
	Strontium (Sr)-Dissolved (mg/L)	0.915				
	Sulfur (S)-Dissolved (mg/L)	777				
	Thallium (Tl)-Dissolved (mg/L)	0.000059				
	Tin (Sn)-Dissolved (mg/L)	<0.00020 DLA				
	Titanium (Ti)-Dissolved (mg/L)	<0.00060 DLA				
	Uranium (U)-Dissolved (mg/L)	0.00169				
	Vanadium (V)-Dissolved (mg/L)	<0.0010 DLA				
	Zinc (Zn)-Dissolved (mg/L)	0.317				
	Zirconium (Zr)-Dissolved (mg/L)	<0.00060 DLA				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

Qualifiers for Individual Samples Listed:

Sample Number	Client Sample ID	Qualifier	Description
L1608599-6	0146-150504-037	WSMD	Water sample(s) for dissolved mercury analysis was not submitted in glass or PTFE container with HCl preservative. Results may be biased low.

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Alkalinity, Bicarbonate (as CaCO3)	B	L1608599-1, -2
Method Blank	Alkalinity, Total (as CaCO3)	B	L1608599-1, -2
Duplicate	Cyanate	DLIS	L1608599-1, -10, -11, -2, -3, -4, -6, -7, -8, -9
Duplicate	Cyanate	DLIS	L1608599-12, -13, -14, -15, -16, -17, -18, -19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31
Duplicate	Cadmium (Cd)-Dissolved	DLM	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Titanium (Ti)-Dissolved	DLM	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Titanium (Ti)-Dissolved	DLM	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Method Blank	Chromium (Cr)-Total	MB-LOR	L1608599-10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -20, -21, -22, -6, -7, -8, -9
Matrix Spike	Arsenic (As)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Cobalt (Co)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Nickel (Ni)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31,

Reference Information

	Parameter	Qualifier	Applies to Sample Number(s)
			-4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1608599-1, -10, -11, -12, -13, -14, -15, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. All associated sample results are at least 5 times greater than blank levels and are considered reliable.
DLA	Detection Limit adjusted for required dilution
DLB	Detection Limit was raised due to detection of analyte at comparable level in Method Blank.
DLIS	Detection Limit Adjusted: Insufficient Sample
DLM	Detection Limit Adjusted due to sample matrix effects.
DTC	Dissolved concentration exceeds total. Results were confirmed by re-analysis.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-PCT-VA	Water	Alkalinity by Auto. Titration	APHA 2320 "Alkalinity"
This analysis is carried out using procedures adapted from APHA Method 2320 "Alkalinity". Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.			
ALK-PCT-VA	Water	Alkalinity by Auto. Titration	APHA 2320 Alkalinity
This analysis is carried out using procedures adapted from APHA Method 2320 "Alkalinity". Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.			
BE-D-L-CCMS-VA	Water	Diss. Be (low) in Water by CRC ICPMS	APHA 3030B/6020A (mod)
Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
BE-T-L-CCMS-VA	Water	Total Be (Low) in Water by CRC ICPMS	EPA 200.2/6020A (mod)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
CL-IC-N-WR	Water	Chloride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
CN-CNO-WT	Water	Cyanate	APHA 4500-CN-L
This analysis is carried out using procedures adapted from APHA method 4500-CN "Cyanide". Cyanate is determined by the Cyanate hydrolysis method using an ammonia selective electrode			
CN-SCN-VA	Water	Thiocyanate by Colour	APHA 4500-CN CYANIDE
This analysis is carried out using procedures adapted from APHA Method 4500-CN- M "Thiocyanate" Thiocyanate is determined by the ferric nitrate colourimetric method.			
CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.			
CN-WAD-CFA-VA	Water	Weak Acid Diss. Cyanide in water by CFA	APHA 4500-CN CYANIDE
This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.			
EC-PCT-VA	Water	Conductivity (Automated)	APHA 2510 Auto. Conduc.
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
F-IC-N-WR	Water	Fluoride in Water by IC	EPA 300.1 (mod)

Reference Information

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HARDNESS-CALC-VA Water Hardness APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

HG-D-CVAA-VA Water Diss. Mercury in Water by CVAAS or CVAFS APHA 3030B/EPA 1631E (mod)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.

HG-T-CVAA-VA Water Total Mercury in Water by CVAAS or CVAFS EPA 1631E (mod)

Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.

IONBALANCE-VA Water Ion Balance Calculation APHA 1030E

Cation Sum, Anion Sum, and Ion Balance (as % difference) are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Because all aqueous solutions are electrically neutral, the calculated ion balance (% difference of cations minus anions) should be near-zero.

Cation and Anion Sums are the total meq/L concentration of major cations and anions. Dissolved species are used where available. Minor ions are included where data is present. Ion Balance is calculated as:

Ion Balance (%) = [Cation Sum-Anion Sum] / [Cation Sum+Anion Sum]

MET-D-CCMS-VA Water Dissolved Metals in Water by CRC ICPMS APHA 3030B/6020A (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-DIS-LOW-ICP-VA Water Dissolved Metals in Water by ICPOES EPA 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-T-CCMS-VA Water Total Metals in Water by CRC ICPMS EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-TOT-LOW-ICP-VA Water Total Metals in Water by ICPOES EPA 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

NH3-F-VA Water Ammonia in Water by Fluorescence APHA 4500 NH3-NITROGEN (AMMONIA)

This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.

NH3-F-VA Water Ammonia in Water by Fluorescence J. ENVIRON. MONIT., 2005, 7, 37-42, RSC

This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.

NO2-L-IC-N-WR Water Nitrite in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO3-L-IC-N-WR Water Nitrate in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

PH-PCT-VA Water pH by Meter (Automated) APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

Reference Information

PH-PCT-VA Water pH by Meter (Automated) APHA 4500-H pH Value

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

S-DIS-ICP-VA Water Dissolved Sulfur in Water by ICPOES EPA SW-846 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Method Limitation: This method will not give total sulfur results for all samples. Sulfide or other volatile forms of sulfur that may be present in submitted samples, is often lost during the sampling, preservation and analysis process. The data reported as total and/or dissolved sulfur represents all non-volatile forms of sulfur present in a particular sample.

S-TOT-ICP-VA Water Total Sulfur in Water by ICPOES EPA SW-846 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Method Limitation: This method will not give total sulfur results for all samples. Sulfide or other volatile forms of sulfur that may be present in submitted samples, is often lost during the sampling, preservation and analysis process. The data reported as total and/or dissolved sulfur represents all non-volatile forms of sulfur present in a particular sample.

SO4-IC-N-WR Water Sulfate in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

TDS-CALC-VA Water TDS (Calculated) APHA 1030E (20TH EDITION)

This analysis is carried out using procedures adapted from APHA 1030E "Checking Correctness of Analyses".

TSS-MAN-WR Water Total Suspended Solids by Gravimetric APHA 2540 D

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Suspended Solids are determined by filtering a sample through a glass fibre filter and drying the filter at 104 degrees celsius.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WR	ALS ENVIRONMENTAL - WHITEHORSE, YUKON, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

1 2 3 4 5

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L1608599-COFC

COC Number: 14 -

Page ____ of ____

Report To	
Company:	EDI
Contact:	Meghan Marjanovic
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8
Phone:	867-393-4882

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL

Quality Control (QC) Report with Report ☐ Yes ☐ No

☐ Criteria on Report - provide details below if box checked

Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: mmarjanovic@edynamics.com

Email 2

Turnaround Time (TAT) is not available for all tests

R ☐ Regular (Standard TAT if received by 3 pm - business days)

P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT

E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT

E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge

Specify Date Required for E2,E or P:

Invoice To	
Same as Report To	☑ Yes ☑ No
Copy of Invoice with Report	☑ Yes ☐ No
Company:	EDI
Contact:	S Jenner

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: sjenner@edynamics.com

Email 2: mmarjanovic@edynamics.com

Project Information

ALS Quote #:	Q49310
Job #:	MOUNT NANSEN 15-Y-0146
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)

Approver ID: | Cost Center: | GL Account: | Routing Code: | Activity Code: | Location:

ALS Lab Work Order # (lab use only)

ALS Contact: Sean Slugget | Sampler: DH, BP, DS

Analysis Request — Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA-VA (P)	CN-CNO-WT (P)	CN-SCN-VA (P)	NH3-F-VA (P)	MET-T-BCMDG-VA (P)	MET-D-BCMDG-VA (F/P)	IONBALANC-VA, TDS-CALC-VA	Number of Containers
	0146-150504-036	04-May-15	16:45	Water	R	R	R	R	R	R	R	R	R	9
	0146-150504-034	04-May-15	16:05	Water	R	R	R	R	R	R	R	R	R	9
	0146-150504-033	04-May-15	18:30	Water	R	R	R	R	R	R	R	R	R	9
	0146-150504-035	04-May-15	13:30	Water	R	R	R	R	R	R	R	R	R	9
	0146-150505-025	05-May-15	08:18	Water	R	R	R	R	R	R	R	R	R	7
	0146-150504-037	04-May-15	13:25	Water	R	R	R	R	R	R	R	R	R	9
	0146-150505-020	05-May-15	13:45	Water	R	R	R	R	R	R	R	R	R	9
	0146-150504-Field Blank	04-May-15	16:25	Water	R	R	R	R	R	R	R	R	R	9

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ Yes ☑ No

Are samples for human drinking water use? ☐ Yes ☑ No

Special Instructions / Specify Criteria to add on report (client Use)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice packs Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C: 8.7 5.1 8.5 5.4 5.1 | FINAL COOLER TEMPERATURES °C

SHIPMENT RELEASE (client use)

Released by: [signature] | Date: 07 May 2015 | Time: 09:45

INITIAL SHIPMENT RECEPTION (lab use only) — Received by: | Date: | Time:

FINAL SHIPMENT RECEPTION (lab use only) — Received by: | Date: | Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION — WHITE - LABORATORY COPY — YELLOW - CLIENT COPY

NA-FM-0326e v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L1608599-COFC

COC Number: 14 -

Page ____ of ____

Report To		Report Format / Dis		ish Turnaround Time (TAT) is not available for all tests)
Company:	EDI	Select Report Format:	☑ PDF ☑	d by 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report	☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked		E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
		Select Distribution:	☐ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	867-393-4882	Email 1 or Fax	mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2		

Invoice To	Same as Report To	☑ Yes ☑ No	Invoice Distribution	
	Copy of Invoice with Report	☑ Yes ☐ No	Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Company:	EDI		Email 1 or Fax	sjenner@edynamics.com
Contact:	S Jenner		Email 2	mmarjanovic@edynamics.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only): ____ ALS Contact: Sean Slugget Sampler: DH, BP, DS

Analysis Request — Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA	Number of Containers
					P	P	P	P	P	P	P	F/P		
	0146-1505 05- 024	05 - May -15	10:35	Water	R	R	R	R	R	R	R	R	R	9
	0146-1505 05- 023	05 - May -15	10:20	Water	R	R	R	R	R	R	R	R	R	9
	0146-1505 05- 030	05 - May -15	16:46	Water	R	R	R	R	R	R	R	R	R	9
	0146-1505 05- 029	05 - May -15	17:15	Water	R	R	R	R	R	R	R	R	R	9
	0146-1505 05- 022	05 - May -15	12:20	Water	R	R	R	R	R	R	R	R	R	9
	0146-1505 05- 028	05 - May -15	16:25	Water	R	R	R	R	R	R	R	R	R	9
	0146-1505 05- 021	05 - May -15	11:35	Water	R	R	R	R	R	R	R	R	R	9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	
Are samples for human drinking water use? ☐ Yes ☑ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice packs ☐ Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
	07 May 2015	09:51						

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-0326a v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

Chain of Custody (COC) / Analytical Request Form

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Canada Toll Free: 1 800 668 9878

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COC Number: 14 -

Page ____ of ____

Report To		Report Format / Distri	Turnaround Time (TAT) is not available for all tests
Company:	EDI	Select Report Format: ☑ PDF ☑ EXC	☐ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report ☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	867-393-4882	Email 1 or Fax mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2	Analysis Request

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Company:	EDI	Email 1 or Fax sjenner@edynamics.com	
Contact:	S Jenner	Email 2 mmarjanovic@edynamics.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only):

ALS Contact: Sean Slugget Sampler: DH, BP, DS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA					Number of Containers
					P	P	P	P	P	P	P	F/P						
	0146-1505 - TRAVEL BLANK	- May -15	—	Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 05- 019	05 - May -15	14:45	Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 05- 026	05 - May -15	14:50	Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 05- 027	05 - May -15	15:55	Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 -	- May -15		Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 -	- May -15		Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 -	- May -15		Water	R	R	R	R	R	R	R	R	R					9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☐ No Are samples for human drinking water use? ☐ Yes ☐ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐
Ice packs Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐
Cooling initiated ☐

INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C	

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Brett Pogue	7 May 2015	09:53						

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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Chain of Custody (COC) / Analytical Request Form

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COC Number: 14 -

Page 1 of

Report To		Report Format / Distri	Turnaround Time (TAT) is not available for all tests)
Company:	EDI	Select Report Format: ☑ PDF ☑ EXC	y 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report ☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
Phone:	867-393-4882	Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
		Email 1 or Fax mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2	

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution	Analysis Request
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:	EDI	Email 1 or Fax sjenner@edynamics.com	
Contact:	S Jenner	Email 2 mmarjanovic@edynamics.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only):

ALS Contact: Sean Slugget | Sampler: DH, BP, DS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA	Number of Containers
					P		P	P	P	P	P	F/P		
	0146-150506 - 001	06 - May -15	08:45	Water	R	R	R	R	R	R	R	R	R	9
	0146-150506 - 006	06 - May -15	08:15	Water	R	R	R	R	R	R	R	R	R	9
	0146-150506 - 004	06 - May -15	09:45	Water	R	R	R	R	R	R	R	R	R	9
	0146-150506 - 002	06 - May -15	09:25	Water	R	R	R	R	R	R	R	R	R	9
	0146-150506 - 005	06 - May -15	11:10	Water	R	R	R	R	R	R	R	R	R	9
	0146-150506 - 003	06 - May -15	08:20	Water	R	R	R	R	R	R	R	R	R	9
	0146-150506 - 031	06 - May -15	10:23	Water	R	R	R	R	R	R	R	R	R	9
	0146-150506-032	06-May 15	10:25	Water	R	R	R	R	R	R	R	R	R	9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☐ No	
Are samples for human drinking water use? ☐ Yes ☐ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations ☐ Yes ☐ No ☐

Ice packs ☐ Yes ☐ No ☐ Custody seal intact ☐ Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C | FINAL COOLER TEMPERATURES °C

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Brett Pollock	Date: 7 May 2015	Time: 09:50	Received by:	Date:	Time:	Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L1608599-COFC

COC Number: 14 -

Page 1 of 1

Report To		Report Format / Distribution		Turnaround Time (TAT) (Rush TAT is not available for all tests)
Company:	EDI	Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report	☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked		E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
		Select Distribution:	☐ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	867-393-4882	Email 1 or Fax	mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2		

Invoice To		Invoice Distribution	
	Same as Report To ☑ Yes ☑ No		
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Company:	EDI	Email 1 or Fax	slenner@edynamics.com
Contact:	S Jenner	Email 2	mmarjanovic@edynamics.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only):

ALS Contact: Sean Slugget Sampler: DH, BP, DS

Analysis Request — Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA -VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA					Number of Containers
							P	P	P	P	P	F/P						
	0146-1505 06- 010	06 - May -15	12:45	Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 06- 009	06 - May -15	11:55	Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 06- 016	06 - May -15	12:00	Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 06- 018	06 - May -15	13:20	Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 -	- May -15		Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 -	- May -15		Water	R	R	R	R	R	R	R	R	R					9
	0146-1505 -	- May -15		Water	R	R	R	R	R	R	R	R	R					9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client use)
Are samples taken from a Regulated DW System? ☐ Yes ☐ No	
Are samples for human drinking water use? ☐ Yes ☐ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐
Ice ☐ Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Brett Pogue	Date: 7 May 2015	Time: 09:45	Received by:	Date:	Time:	Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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NA-FM-0328a v09 Front/04 January 2014

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